

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1 (previously presented): A method of aligning transmitted data by adjusting transmission
5 timing for a plurality of lanes, the lanes being respectively connected to a plurality of
elastic buffers, the method comprising:
determining if an elastic buffer corresponding to the lane adjusts the number of SKP
symbols within an ordered set having the COM symbol when a COM symbol is
detected on a lane;
10 resetting a count value corresponding to the lane to a first initial value if said elastic
buffer corresponding to the lane adds an SKP symbol to the ordered set having said
COM symbol;
resetting said count value corresponding to the lane to a second initial value if said
elastic buffer corresponding to the lane deletes said SKP symbol from the ordered
15 set having said COM symbol;
resetting said count value corresponding to the lane to a third initial value if said elastic
buffer corresponding to the lane does not adjust the number of SKP symbols within
the ordered set having said COM symbol;
increasing said count value corresponding to the lane by an increment value when a
20 COM symbol is not detected on the lane; and
aligning the transmitted data by adjusting transmission timing for the plurality of lanes
according to a plurality of count values respectively corresponding to the lanes if a
COM symbol is not detected on the lanes within a predetermined period of time.
- 25 2 (original): The method of claim 1, wherein said second initial value is greater than said
third initial value and said third initial value is greater than said first initial value.

3 (original): The method of claim 1, wherein a difference between said second and said third initial values is equal to a difference between said third and said first initial values.

4 (original): The method of claim 1, wherein each of a difference between said second
5 said and third initial values and a difference between said third and said first initial values
is equal to said increment value.

5 (original): The method of claim 1, further comprising: recording an offset value,
wherein said offset value is the minimum value among said count values.
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6 (previously presented): The method of claim 5, further comprising: when said COM
symbol is detected on the lane, resetting said offset value to said second initial value
to if said elastic buffer corresponding to the lane deletes said SKP symbol from the
ordered set having said COM symbol.
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7 (previously presented): The method of claim 5, further comprising:
when said COM symbol is detected on the lane, resetting said offset value to the third
initial value if said elastic buffer corresponding to the lane deletes said SKP symbol from
the ordered set having said COM symbol and said offset value currently corresponds to
20 said first initial value.

8 (previously presented): The method of claim 5, further comprising:
when said COM symbol is detected on the lane, resetting said offset value to said first
initial value if said elastic buffer corresponding to the lane adds said SKP symbol to the
25 ordered set having said COM symbol.

9 (previously presented): The method of claim 5, further comprising:
when said COM symbol is detected on the lane, resetting said offset value to said third

initial value if said elastic buffer corresponding to the lane does not adjust said number of SKP symbols within the ordered set having said COM symbol.

10 (original): The method of claim 5, further comprising:

- 5 when said COM symbol is not detected on the lane, increasing said offset value by said increment value.

11 (previously presented): The method of claim 5, further comprising:

- calculating a plurality of differences between said count values and said offset value, and
10 aligning the transmitted data by adjusting transmission timing for the lanes according to said differences.

12 (original): The method of claim 1, further comprising:

- if said COM symbol is detected on lanes, triggering a control signal having a transition
15 from a first logic level to a second logic level; and
if said COM symbol is not detected on lanes, resetting said control signal wherein said control signal has a transition from the second logic level to the first logic level.

13 (previously presented): The method of claim 12, wherein said transmitted data for the
20 plurality of lanes is aligned if a period when said control signal holds the first logic level is longer than the predetermined period of time.

- 14 (previously presented): A data alignment circuit for aligning transmitted data by adjusting transmission timing for a plurality of lanes, the lanes respectively connected to a
25 plurality of elastic buffers, said data alignment circuit comprising:
a plurality of detectors coupled to the lanes for detecting COM symbols within ordered sets transmitted via the lanes;
a plurality of first counters for counting a plurality of count values corresponding to the

lanes;

a decision logic coupled to said detectors and said first counters for determining whether an elastic buffer corresponding to a lane adjusts the number of SKP symbols within an ordered set having said COM symbol when said COM symbol is detected on the lane, wherein said decision logic resets a count value corresponding to the lane to a first initial value if said elastic buffer corresponding to the lane adds an SKP symbol to the ordered set having said COM symbol, the decision logic resets said count value corresponding to the lane to a second initial value if said elastic buffer corresponding to the lane deletes said SKP symbol from the ordered set having said COM symbol, and said decision logic resets said count value corresponding to the lane to a third initial value if said elastic buffer corresponding to the lane does not adjust the number of SKP symbols within the ordered set having said COM symbol;

a plurality of de-skew buffers; and

a controller coupled to said first counters and said de-skew buffers for driving said de-skew buffers to align the transmitted data of the lanes according to said count values respectively corresponding to the lanes if said detectors do not detect said COM symbol within a predetermined period of time;

wherein if said detector does not detect said COM symbol on the lane, a first counter corresponding to the lane increases said count value corresponding to the lane by an increment value.

15 (previously presented): The data alignment circuit of claim 14, wherein said second initial value is greater than said third initial value and said third initial value is greater than said first initial value.

16 (previously presented): The data alignment circuit of claim 14, wherein a difference between said second and said third initial values is equal to a difference between said third and said first initial values.

17 (previously presented): The data alignment circuit of claim 14, wherein each of a difference between said second and said third initial values and a difference between said third and said first initial values is equal to said increment value.

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18 (previously presented): The data alignment circuit of claim 14, further comprising: a second counter coupled to said decision logic for counting an offset value, wherein said offset value is the minimum value among said count values.

10 19 (previously presented): The data alignment circuit of claim 18, wherein when said COM symbol is detected on the lane, said decision logic determines if said elastic buffer corresponding to the lane adjusts the number of SKP symbols within the ordered set having said COM symbol for resetting said offset value by one of said first, said second, and said third initial values.

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20 (previously presented): The data alignment circuit of claim 18, wherein if said detectors do not detect said COM symbol on the lanes, said second counter increases said offset value by said increment value.

20 21 (previously presented): The data alignment circuit of claim 14, wherein said controller calculates a plurality of differences between said count values and said offset value, and aligns the transmitted data of the lanes according to said differences.

22 (previously presented): The data alignment circuit of claim 14, further comprising:
25 a trigger coupled to said detectors and said controller for generating a control signal used for controlling said controller to drive said de-skew buffers to align the transmitted data of the lanes;
wherein if said detectors detect said COM symbol on the lanes, said trigger triggers said

control signal having a transition from a first logic level to a second logic level, and if said detectors do not detect said COM symbol on the lanes, said trigger resets said control signal wherein said control signal has a transition from the second logic level to the first logic level.

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23 (previously presented): The data alignment circuit of claim 22, wherein said controller aligns the transmitted data of the lanes if a period when said control signal holds the first logic level is longer than the predetermined period of time.

10 24-29 (cancelled).